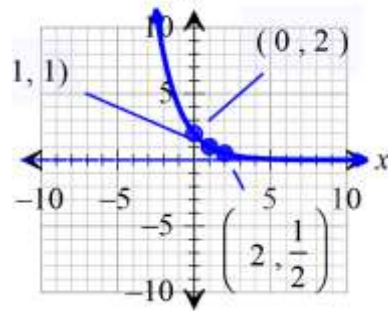


SM3 9.1-9.4 Test review 40 points total

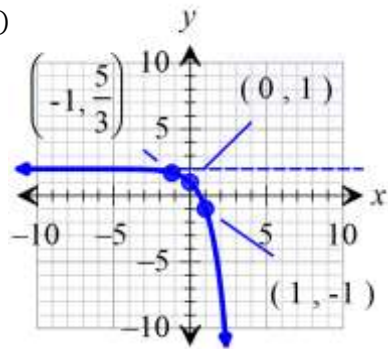
1. $\frac{-1}{4x^9}$
2. $32x^{15}$
3. $-12x^5$
4. $x = 1$
5. $x = 2$
6. reflect over y-axis, translate down 7 (2pt)
7. vertical stretch of 3, translate left 3 (2pt)
8. D
9. A
10. A and D because the graphs pass the horizontal line test (2 pt)

11-14 are 6 points each. See worked out solutions for point values.

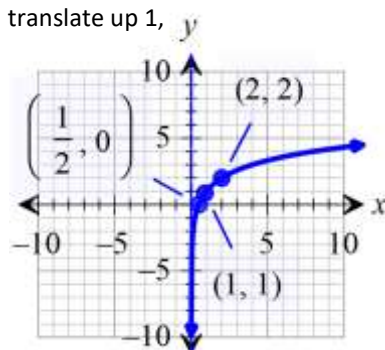
11. Domain: $(-\infty, \infty)$, Asymptote: $y = 0$
Key points and transformations: translate right 1,
Range: $(0, \infty)$



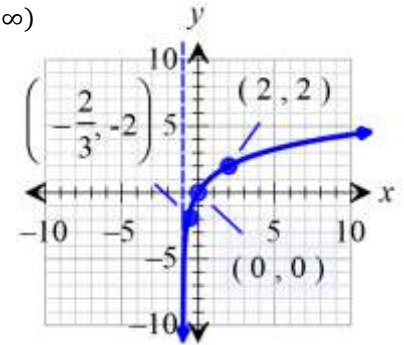
12. Domain: $(-\infty, \infty)$, Asymptote: $y = 2$
Key points and transformations: reflect over x-axis,
translate up 2, Range: $(-\infty, 2)$



13. Domain: $(0, \infty)$, Asymptote: $x = 0$
Key points and transformations: translate up 1,
Range: $(-\infty, \infty)$



14. Domain: $(-1, \infty)$, Asymptote: $x = -1$
Key points and transformations: vertical stretch of 2,
translate left 1, Range: $(-\infty, \infty)$



15. $f^{-1}(x) = \frac{x+3}{2}$

16. $f^{-1}(x) = \sqrt[3]{4x+2}$

17. $f^{-1}(x) = x^2 - 3$